

USSN: 09/734,101

Atty. Docket No.: 10244

Amdt. dated August 21, 2003

Reply to Office Action of May 21, 2003

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### REMARKS/ARGUMENTS

Upon entry of the claim amendments, Claims 1-10 will be all the claims pending in the application.

Applicants have amended Claim 1 consistent with the description at page 1, line 6, and page 3, line 6, of the specification. New Claim 10 is supported by the description at page 10, lines 11-13 of the specification. No new matter has been added.

Applicants note with appreciation the Examiner's decision to withdraw the finality of the Action mailed March 19, 2003, as indicated at Section No. 8 of the present Action.

At Section No. 3 (page 3) of the Action, Claims 1-2 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent 3,853,601 to Taskier.

Applicants respectfully traverse.

The claimed film is "for ink jet printing" and is "ink-absorbing." Taskier does not disclose (anticipate) or suggest (render obvious) the claimed film.

The recitation "for ink jet printing" must be given patentable weight. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. *See, Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989). During examination, statements in the preamble that recite the intended use of the claimed invention and result in a structural difference between the claimed invention and the prior art serve to limit the claim. *See, In re Otto*, 136 USPQ 458, 459 (CCPA 1963). If a prior art structure is incapable of performing the intended use as recited in the preamble, then the prior art structure cannot meet the claim. *See, In re Schreiber*, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

The fact that the claimed film is for ink jet printing, and the fact that it is ink-absorbing, results in a structural difference between the claimed film and Taskier. In particular, the claimed

USSN: 09/734,101

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film is able to absorb ink. As explained at page 3, lines 1-9, if the claimed film did not absorb ink, it would be incapable of use for ink jet printing. The claimed film not only absorbs ink, it rapidly absorbs ink for high quality print images.

The hydrophilic film of Taskier is incapable of being used for ink jet printing. Not only does Taskier's film not rapidly absorb ink, it simply doesn't absorb ink at all. As indicated at column 3, lines 31-34, the hydrophilic film of Taskier has a pore size sufficiently small to bar the flow of ions but large enough to permit the flow therethrough of electrons. This distinction between Taskier's film and the claimed film is further clarified by noting that Taskier's film is used as a battery separator. The properties that make Taskier's film suitable for being a battery separator (i.e., allow the passage of electrons, but not ions, let alone ink) preclude it from being used for ink jet printing.

Furthermore, Taskier's film does not render obvious the claimed film because Taskier's film cannot be modified to arrive at the claimed film. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *See, In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984). In the present case, Taskier's film is supposed to allow the passage of only electrons. Making the pore size of Taskier's film large enough to accommodate the flow of electrons and larger matter, such as ions or even ink, would destroy the teachings of Taskier and prohibit Taskier's film from being used as a battery separator.

Turning to Section Nos. 4-7, the following art rejections are set forth:

claims 1-3 and 9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent 6,383,612 to Waller, Jr. *et al.* ("Waller") in view of U.S. Patent 5,120,594 to Mrozinski and U.S. Patent 5,968,643 to Topolkaev, *et al.* ("Topolkaev");

claims 5-6 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Waller in view Mrozinski and Topolkaev, and

USSN: 09/734,101

Atty. Docket No.: 10244

Amdt. dated August 21, 2003

Reply to Office Action of May 21, 2003

further in view of U.S. Patent 5,721,086 to Emslander, *et al.* ("Emslander");

claims 1-4 and 9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Waller in view of U.S. Patent 5,326,391 to Anderson, *et al.* ("Anderson") and Topolkaev; and

claims 5-8 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Waller in view of Anderson and Topolkaev, and further in view of Emslander.

Applicants respectfully traverse each of the rejections.

Waller is the primary reference in each of these rejections. Waller, however, suffers from a deficiency that cannot be cured by any of the secondary references. The deficiency precludes Waller, in combination with any of the secondary references (including Topolkaev), from rendering obvious the claimed film.

Specifically, Waller requires that its microporous membrane be impregnated with the combination of a surfactant and one or more of a variety of other materials, including additional surfactants ("a combination of surfactants"), a fluorinated silica agglomerate together with a binder, and a multivalent metal salt. It is completely unexpected from Waller, and the combination of Waller and any of the cited secondary references (including Topolkaev), that the claimed coating consisting essentially of a silicone glycol composition would achieve the superior results demonstrated by the examples and Table 1 of the present specification.

In this regard, it is well-settled that a *prima facie* case of obviousness may be rebutted by a showing of the unexpected results achieved by the claimed invention. A review of Table 1 (page 19) reveals that the claimed porous HDPE film coated with only a silicone glycol surfactant gave the best drying time. This result is completely unexpected from Waller or Waller combined with any of the secondary references (including Topolkaev).

USSN: 09/734,101

Atty. Docket No.: 10244

Amdt. dated August 21, 2003

Reply to Office Action of May 21, 2003

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It should also be noted from Table 1 that the various coatings of mixtures of binders and surfactants gave relatively high drying times. Indeed, the addition of PVOH binder to the silicone glycol hindered the drying time of the ink (compare Examples 6 and 12). Furthermore, the coating of a surfactant other than the silicone glycol surfactant also resulted in higher drying times than that of the silicone glycol surfactant alone. Thus, Waller specifically requires the inclusion of materials (e.g., binders) that the present specification has shown hinders the ability of the silicone glycol coating to promote drying of ink applied to the coated film.

It is only with the benefit of the present disclosure that a person of ordinary skill in the art would come to understand that the coating material used to treat the porous HDPE film should be essentially free of materials other than silicone glycol, such as binders (especially PVOH), acrylic coatings and sorbitants of an ester of a fatty acid surfactant, in forms and amounts which substantially hinder the ability of the silicone glycol coating to promote drying of ink applied to the coated film.

There is still a further reason that the combination of Waller and any of the secondary references does not render obvious the claimed invention.

Waller is completely silent as to the silicone glycol surfactant. The Examiner asserts that Topolkaraev discloses a list of surfactants, including a silicone glycol copolymer. The Examiner concludes that it would have been obvious to employ a silicone glycol copolymer as the surfactant because of its readily availability.

Applicants respectfully disagree.

First, Topolkaraev's processing additives and supplemental materials are compounded into the source material to provide the films of Topolkaraev. For example, in Topolkaraev's inventive Examples 1, 2, and 4 [according to Topolkaraev, Examples 1, 2, and 4 are inventive, whereas Examples 5 and 9-12 are comparative (*see*, column 21, lines 56-58)], calcium carbonate filler, which has been modified with a silicone glycol surfactant, is compounded with the resin (in each case an ethylene-octene-1 copolymer), *i.e.*, the source material, that forms the film. It is

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Atty. Docket No.: 10244  
Amdt. dated August 21, 2003  
Reply to Office Action of May 21, 2003

---

well-understood by a person of ordinary skill in the art that a film layer having additional materials compounded therein is structurally distinct from a film layer having a composition coated thereon. Thus, a person of ordinary skill in the art would not necessarily look to Topolkaraev's disclosure when looking for a component to use in Waller's coating.

Second, the mere possibility that the prior art may be modified so as to arrive at the claimed invention does not render obvious the invention unless the prior art suggested the desirability of the modification. The suggestion to modify must be "clear and particular" [*see, In re Sang Su Lee*, 2002 U.S. App. LEXIS 855 (Fed. Cir. 2002); *Winner Int'l Royalty Corp. v. Ching-Rong Wang*, 53 USPQ2d 1580, 1586-1587 (Fed. Cir. 2000)]. In the present case, "readily availability" does not amount to a clear and particular suggestion to modify Waller's disclosure.

Third, the unexpected results mentioned above rebut any alleged *prima facie* case of obviousness.

For the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw these prior art rejections based on Waller, Topolkaraev and the other secondary references.


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Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: August 21, 2003

  
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